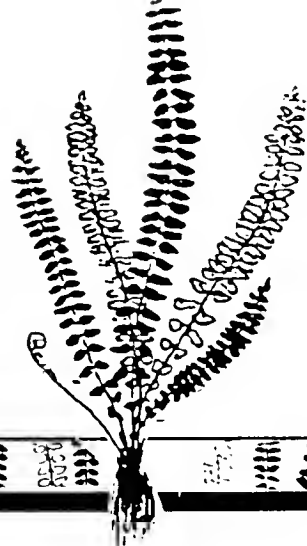


Hardy Fern Foundation

NEWSLETTER

Editor Sue Olsen ■ VOLUME 3 NUMBER 2 ■ SPRING 1993



President's Message

GUY HUNTLEY

Spring has come — reluctantly it seems, but it is here. Finally. A difficult winter for all, it seems - it will be interesting to see how the ferns fared in our Satellites and in your gardens. Remember that June is **EVALUATION MONTH**, a time for all to wander through their ferns making note of what has done well, what has expired, what surprises you find. We'll be doing this at the primary garden here at RSF, our satellite gardens will be doing it, we'd like you to join in as well. Further instructions can be found in a separate article.

Winter was as rough on us as it was on most others in the country. On January 20th we had a storm - the Inauguration Day Storm of 93 - in which record winds swept up from the South, laying flat countless numbers of trees, buildings, etc. Though nothing in comparison to the Hurricane damage at Fairchild last year, or to the carnage at Birmingham Botanical Garden the year before that, the storm did topple a fair number of trees at our primary garden. Damage to the ferns seems minimal, all were dormant and new growth seems undeterred. The crew at the RSF has done an admirable job in removing the trees, cutting them into manageable pieces and hauling most away by hand, minimizing further damage. The biggest threat now seems to be

the sudden presence of sunlight. Rearrangement of some plantings is our main concern.

The first of February found volunteers manning an educational exhibit at the Northwest Flower and Garden Show in Seattle. The Hardy Fern Foundation had a nice display of ferns, as well as literature about your organization. The volunteers were always on hand to dispense information on the Foundation, on ferns themselves, and a myriad of other topics! A big thanks goes to all those who put in time for this effort - **THANK YOU!** A special thanks must go to Tom Gillies, who chaired the Flower Show committee, made all the arrangements for the HFF, and put in very long days at the five day show. His efforts were extraordinary - his results even more so. Thank-you Tom, for all your hard work- how about doing it again next year?

Our book collection received a big boost in the past few months. Our thanks go to Don Armstrong of Vancouver, B.C. who donated a collection of vintage and more recent fern books. Among them can be found some real gems, and the Foundation was fortunate to receive them. Two of our board members, Jocelyn Horder and Sylvia Duryee also donated a beautiful collection of mostly 19th century British Fern books. In these can be found the beginnings of many of the fern varieties commonly grown today, as well as

spectacular examples of ferns no longer grown. As references, both collections are invaluable to our library - thanks to the three of you for presenting the Foundation with such valuable additions.

Mark your calendar now for June 6th, which is our annual Open House and Members' Day at the Rhododendron Species Foundation. This is the Sunday immediately following the Northwest Horticulture Society's Fern Festival (call the NHS office for details: 206 527 1794). Highlights of Members' day will be a tour of the Fern Garden; a presentation on sowing spores (with all attendees taking home spore sown in their own

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On Account of Andrew

DEBBIE LAMB - MIAMI, FL

Today is January 26 and I'm sitting here still thinking about hurricane Andrew.

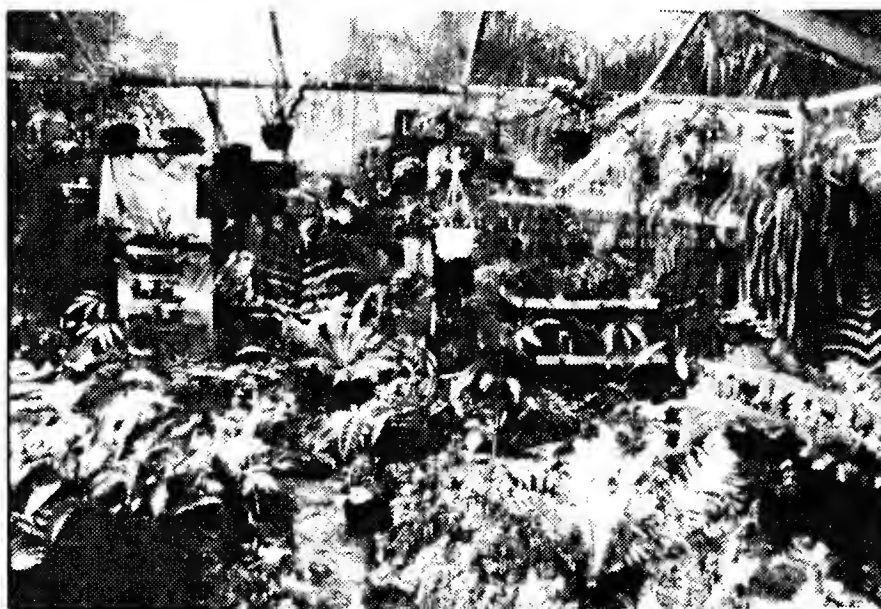
I had a friend call me from North Miami a couple of months ago who asked if "Everything was back to normal now?" My response was silence. I wasn't trying to be rude, I was just dumbfounded by this question. Normal? No, not for a long, long time. About the best we can do here right now is teeter on a routine. At that time I was still cringing at every rainstorm because of all the leaks we still had, in spite of a hastily installed temporary dry-in of tar paper.

For about a month, I've had a 'real' tarpaper roof and if the shingles will ever come in, I'll have that too. That is all I've managed to accomplish in 5 months since the storm. The roof is costing \$7,400.00. Before the storm, it would have been about \$3,500.00. But I'm elated to have a contractor! And I'm lucky to have found a good one.

When I call people for estimates, most of the time they don't even show for the appointment. If I manage to get someone to come out, I've become so desperate I sign up to have the work done on the spot. Then the salesman hits me up for a 50% deposit and tells me he can do my job "sometime in March".

I got \$350.00 for the aluminum that went into the 33' x 90' enclosure I had for my plants. The new enclosure will cost \$15,000.00, and I'm still not figuring in the watering system or lattice I had mounted

around the perimeter. The new enclosure was supposed to be up about two weeks ago. Of course, I haven't heard a word from that contractor, but, they have a 50% deposit.



Hurricane Andrew - Lamb Property Before

I have a 20' storage container (like they load on ships with exports) sitting in my driveway. When I put our Christmas lights up this season, I had a real problem with this huge red box in the front yard. So I put a big ribbon and a bow on it with a card that read "Merry Christmas, from Andrew". I've been loading this container for months with all our belongings, so the contractor can come inside and

"Merry Christmas, from Andrew"

put up our ceilings and paint the walls with a littany of different concoctions. First, we have to kill the mildew, then we have to seal the walls with some sort of epoxy paint so the stains and mildew won't sneak back. Then we paint.

All these concoctions have their own 'special' smell, so we'll be living in our 22' RV for a while.

Because I must empty the house to get the work done, our two children are spending the nights on our queen-size bed in the living room. That bed has been moved more times in the last 5 months than in all the 22 years of our marriage! First, it got creamed when the ceiling fell on it

during the storm. So, we dragged it soaking wet and set it in the sun to dry for two days. My husband and I slept on the driveway in our front yard for two nights on a couple of cushions from the RV.

Then a bit smelly and stained, but dry, we dragged it back inside and slept in the living room on it for several weeks until the electricity was restored. The bedrooms were stifling hot. At least with all the doors and windows open in the living room we got a cross breeze. We dragged it back to the bedroom as soon as power came on again. At 3:00 AM one morning I woke up to some Chinese water torture. It was raining and the roof was leaking right over my head. The bed got pushed around like a pinball every rainstorm, just dodging the drips. Now, for the last time (I hope) its back in the living room. And when I'm assured of a dry house (when those shingles come in!) I'm sending that

bed on its last roundup — to the dump. Only then will I permit myself the luxury of buying a new bed.

Stop for a minute and go to your kitchen. Can you guess how many boxes it would take to pack it all up? Don't ask me — I've lost count. Just figuring out what I can afford to lose the use of for 6 months while it is buried in the bowels of the storage container has me drifting in circles.

I can't tell you how many times someone has enviously told me how 'lucky' I am because I've really "cleaned up" because of all the insurance money we've received. That money is supposed to put me back in the same condition I was before hurricane Andrew. It doesn't pay for pain and suffering. I sure wish it could erase a lot of memories.



Hurricane Andrew - Lamb Property After

First, of the actual storm, I was born in Miami. I'd already been through hurricanes Betsy and Donna during the 60s. I never expected anything like Andrew. I purposely woke my two boys so they wouldn't 'miss' their first hurricane. Dumb. The winds got so strong it sounded like a tornado

that lasted half an hour. The french doors in the living room bowed in so far, I thought they were going to implode on us, so we scrambled down the hall and spent the remainder of the storm (about 3 hours) sitting in 3 inches of water. I sat there as calmly as possible reassuring my children that we'd survive and telling them stories I used to tell them at bedtime when they were younger. My stomach was one big knot and my mind was listing the options in case the heaving roof did fly off. I remember thinking of a closet on the east side of our house. Maybe with a mattress over our heads and in the closet, we'd make it. Thankfully the roof held.

After the storm, there was the constant droning sound of helicopters flying back and forth overhead. Occasionally, a C47 transport would fly over at 30 feet. (I'm not kidding). With no trees standing, they had a clear passage at that altitude)

At night, we'd all half-sleep with one ear cocked to the sound of our lifeline — the generator. If it started to

fluctuate, we'd run outside and shut it off and start it up again. It was strong enough to run our refrigerator, a couple of lamps and our T.V. (our lifeline to the rest of civilization). The generator was old, so we shut it down once a day and changed the oil and cleaned the spark plugs, My 10-year old

son took the responsibility of maintaining it on the days my husband, a fireman, was on duty. (He'd be gone for 24 hours every third day). I'll never forget my son, during one of the oil changes, coming to me, trying not to cry, with a look of total despair on his face. He had dropped the spark plug and it had broken the metal tip off so it wouldn't fire. I'm sure he felt he'd let us all down. He knew how important that generator was. We had a spare so everything turned out o.k., but I'm angry at Andrew for making a 10-year old child carry the burden of a man.

We had a 'boil water' order on for at least two months, so any water we used for cooking or drinking was hauled in to us by friends who lived farther north. They brought food, too! Fresh fruits and meats! What a treat! (Canned Dinty Moore Beef Stew was never one of my favorites to begin with!) When some grocery stores finally did open, we had to stand in line for 2 hours to pay. And just to drive the four miles to the store was an all day excursion. There wasn't one stop light working for miles. Regular citizens would stand out in the middle of intersections and direct traffic. The cars driving on the roads looked like junk yard reclamations. Broken windshields, crushed hoods, missing pieces (like doors) etc. Have you ever seen a convertible Dodge Van? I have. Several.

We all stayed home as much as possible — just to avoid the traffic and to wait for insurance adjusters. My neighbor had to drive to Homestead to meet her adjuster. The poor guy was from Virginia and since all the street signs had

blown away, he couldn't find her house.

I think I've given you a pretty good idea of what a disaster is. Pretty depressing, surely, but also some good has come from this. We've seemed to become a 'neighborhood' again. People I haven't talked to twice in 5 years are stopping by just to chat. We all work together, cleaning up, loaning out tools, watching each others' kids and houses. Since all the shrubbery is gone, I can see my neighbor on the next block every morning coming out to get the paper. She probably can see me in the kitchen fixing breakfast. Some of this will change, I know, but I hope we can keep that neighborhood feeling going.

Last, since this article is intended for a fern group, about my ferns. I think about them a lot, I've just not been able to find the time to work on them. All my spore boxes are dead. I couldn't get them back out of the garage until 5 weeks after the storm. I'd like to start some, but I know that will have to wait until I have some place to put them. My fern collection had all been either planted in my free form patio area or in pots which I had placed on the ground before the storm.

When my enclosure came down, it collapsed on top of everything. For five weeks I only had time to water the debris and hope that somewhere, under it all, something would still be alive. Although I did lose many ferns, I don't think I lost too many of any one species. It will take me a couple of years to build the collection back up again. My maidenhairs did very well and are sending up new growth. A lot of my smaller tree ferns rotted before I could dig them out, but the

larger ones in the ground survived the storm because I had cut off all their fronds. Since then, I've lost two *Cyathea arboreas* and two *Cyathea cooperis* due to fungus, I think. I should have sprayed them with a fungicide right after the storm but I was out of it and didn't have the time anyway. I'm having to buy my supplies from the middle of the state because the two suppliers down here were totally devastated. They should be back in business by March though.

As I pulled my ferns out from under the debris, I built temporary shade houses around my backyard, using whatever building materials and shade screen I could salvage. As I filled one shade house up, I'd build on an addition and fill it also. The overflow is sitting in the shade of an orange tree and stuffed in my planter in the front yard. I'm having to hand water everything but we've had so much rain this winter it hasn't been a problem. The temperature is supposed to drop into the 50s tonight and I don't have any way I can protect them from the cold or wind, so I'll probably lose some of the tender tropical stuff. But then, that's all the excuse I need to go on another collecting trip next summer.

Hopefully, I'll have my enclosure back up, and with water, by March. I don't know when I'll rebuild the mist house so any filmies I collect will have to be kept inside my house in terrariums. I feel sure it will all work out.

Certainly, the fern world hasn't seen the last of me! I'm looking forward to the time when I can spend an uninterrupted day repotting my ferns. It's good therapy.

Asplenium adiantum nigrum conclusion:

The following segment of the article by James Horrocks was inadvertently omitted from our last newsletter. With apologies to Jim, we include it here:

Culture: The Black Spleenwort, like all wall ferns, needs good drainage and soil mostly on the alkaline side. It is at its best when planted vertically in a dry stone wall, proving to be very difficult in open ground. It is appreciative of some limestone or broken mortar mixed with humus, but is not especially easy to establish, although this may greatly depend on climatic conditions. It is resentful of too much moisture on the fronds and needs a more open aspect, being intolerant of closed ones. It is neat and attractive and well worth trying in the rock garden or on a rock wall.

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**Special Thank You to Sue Olsen, who is always there with help and encouragement.*

How to Prepare Home & Garden For A Hurricane

DEBBIE LAMB - MIAMI, FL

Unlike earthquakes, tornados, or other natural disasters, you have several days warning to prepare for a hurricane.

Many of us, in Florida, keep bottled water and canned goods stashed away perpetually. In June, the beginning of hurricane season, most of us make sure we have plenty of flashlights and batteries to tide us through those long, dark nights when there's no electricity. With two elementary school age boys, we never have any spare batteries. That's why I found myself standing in a checkout line for 4 hours at 2 AM two days before Andrew hit us. You should also have a battery operated radio so you can tune in during the storm. Of course, I forgot to buy that size battery so we spent the storm in our hallway telling funny stories instead. In retrospect, I don't think it would have done my boys' psyche any good to hear a blow-by-blow account of the storm by Brian Norcross anyway.

You should fill up the gas tanks in all your vehicles. I remember some guy laughing at my husband because he was filling our RV and boat tanks to the tune of about \$85.00, but that gas ran ours and neighbors' generators for quite a few days after the storm. Also, after a storm is no time to try to find gas — all the pumps run on electricity - right?

Its really nice if you have a generator. We just used the one in our RV, so we didn't have to shut it down every 6 hours to refill the tank. It ran our refrigerator, several lights and the TV. Some people connect their generators right to their meters and try to run their whole house. If they don't pull their meters when they do this the power they're generating bleeds back to the pole. If enough households do this, it kills the lineman while he's trying to restore service to the neighborhood. Several FP&L employees were killed that way after Andrew.

I always wash and dry every piece of laundry (especially towels) before the storm. Even so, I found myself washing clothes daily in my husband's Igloo cooler and hanging stuff to dry all over the broken beams of my enclosure.

You should sterilize your bathtubs with bleach and then fill them with water. I had done this, but it leaked so badly throughout my house that the water in the tubs was a muddy brown. After Andrew, we had a 'boil water' order for 7 or 8 weeks, so my husband filled our jugs every third day when he went to work in North Miami.

We put down all our shutters and boarded up our french doors with plywood. My husband used drywall screws and screwed them into the wood frames of the doors instead of the concrete. Our plywood held, our neighbor's didn't. One man had lag bolted 3/4" plywood over his windows, After the storm, his bolts and washers were still in the concrete, but all his plywood was gone. Another neighbor nailed plywood across his front windows. When his plywood blew off, he lost all his windows and the storm literally blew through his home and out his sliding glass doors in the back.

Most importantly, you must pick up your yard and secure anything you can't bring inside. That includes your garbage cans (people always forget them), kids' toys, (they're everywhere, everywhere), and all the pots, mixes and such that go along with a fern lover's ferns. You should also remember to take down your T.V. antenna and put the caps on the roof vents and chimney (if you're lucky enough to have a fireplace). Anything that's too big or permanent to be brought into the garage has to be tied down.

We put all my potting mix in our metal shed and then I tied it every-which-way with rope. All my pots went into my children's playhouse (which was anchored in cement), and we nailed its windows shut. We tied my husband's boat to the trailer, to a chain link fence, to my heavy potting bench, and to a 60' black olive tree in the backyard. We slipped the kids sunfish sailboat under the boat trailer and cranked the trailer tongue down until the sailboat was pinned. We tied my husband's tow sub (yes, he also has a lot of toys!) to the shed and the chain

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Fern Touring with the Hoshizaki's in Australia and New Zealand

SUSAN MAC QUEEN - FREEPORT, NY

I was fortunate to be one of the seven LAIFSers who traveled to Australia and New Zealand in October on the 18-day trip led by Barbara Joe Hoshizaki and her husband Takashi.

CAIRNS

We arrived in Cairns, Australia in the pre-dawn. Tropical Cairns is an unassuming city rich in sunshine and lush tropical trees and shrubs. From here, we spent four full, beautiful days ferning in the Daintree Rainforest, exploring the Great Barrier Reef, and riding in a 100-year old railway coach on a 1,000-foot climb from Cairns to Kuranda Station.

On that first afternoon, we visited Flecker Botanic Gardens in Cairns; 100 acres of palms, fruit trees, and native and exotic rainforest trees. Our group limited itself (naturally) to searching out ferns via a boardwalk through a section of rainforest, and a visit to the small, but rewarding Munro Martin Fern House. The rainforest is a dense, timeless world of green-on-green, filtered sunlight, and new and strange plants in prehistoric proportions. Ferns are everywhere alongside the path, from the tallest tree fern and the mammoth *Angiopteris evecta* to the most delicate and diminutive filmy, covering tree bark, perching on tree limbs, or vying for the light at the

top of the epiphyte-ornamented canopy.

On our walk, I had my first look at *Asplenium nidus* in its natural habitat, growing comfortably in the trees over my head, and *Stenochlaena palustris*, the Climbing Swamp Fern, which ran rampant in the wet dense forest around us. I also saw a Strangler Fig (*Ficus microcarpa*) enveloping a massive gum tree from top to bottom, and was introduced to the rather incongruous-looking Cannonball Tree (*Couroupita quianensis*) which sported gigantic "cannonballs" (fruits) that you would swear someone had put there for a joke.

SYDNEY

Tuesday's pre-dawn departure for Sydney was the first of many during our trip. We were warmly hosted in that new and beautiful city by Judy and John Marley who operate a wholesale fern nursery from their home north of Sydney. With the Marleys that afternoon were Beryl and Jim Geekie, who also own a fern nursery, and Peter Boxtock, a botanist with the Queensland Herbarium, who had made the trip south from Brisbane to be with us.

After a delicious lunch, we walked off our feast with a brief look at Mt. Kuring-gai Chase National Park near the Marley's home. Unfortunately, time didn't allow a longer trek to the fern area. However, we did manage to see a few ferns such as *Gleichenia rupestris* in amongst the rocks we climbed, as well as delicate native orchids and iris and numerous Banksia trees with their strange cones covered in half-opened "eyes".

After a boat tour of Sydney's 16-mile long and colorful harbor the next morning and a tour of the unique and memorable Opera House, we joined the Marleys and Peter for a visit to the Sydney Botanic Garden led by Peter Hind, an SBG botanist. Here we saw the partially-completed fernery which closely resembles the arc-shaped structure at Rippon Lea in Melbourne, and the striking, light-filled Arc and Pyramid glasshouses of the Tropical Centre. The Arc contains exotic plants found in the warm lowland rainforests and high-altitude tropics outside of Australia. The Pyramid houses Australian plants from the monsoonal forests and woodlands which stretch across the northern part of the continent, and the tropical rainforests of NE Queensland.

MELBOURNE

We spent three busy and rewarding days in Melbourne as the guests of Chris Goudey and the Fern Society of Victoria. Our first afternoon there, we visited Malbournae's Royal Botanic Gardens, one of the finest examples of landscaped gardens in the world. The Gardens cover 100 acres and contain 12,000 species of native and imported plants and trees, sweeping lawns, and ornamental lakes surrounded by masses of calla lillies.

In the fern nursery, we saw a *Blechnum vulcanicum* whose fronds spilled out over the pot displaying vibrant red new growth and made a striking contrast with the shiny green of the older fronds. By the time we got to the fern gully, which is built around an old billabong

(pond), the sky had turned black and it began to rain. After a wet trip back to the hotel and a hot shower and change of clothes, we met members of the Society in the lobby for a trip back to the RBG Herbarium for the monthly society meeting at which Barbara and Chris Goudey were the featured speakers.

The next day's trip to the Otway Mountains southwest of Melbourne with members of the Society began with a visit to Chris Goudey's extensive wholesale fern nursery operation in Lara. His fern collection is quite impressive and worth a much longer look. Once on the road, we headed for Mebla Gully State Park, the "Jewel of the Otways" and one of the wettest places in Victoria! The Gully is a dense, 100-acre forest of myrtle beech, blackwood, and tree ferns with an understory of low fern and mosses. We finished the day with a visit to Ray Edwards' underground nursery situated on a hill with a magnificent view of Bass Strait which separates Australia and Tasmania. Ray raises tube-grown sporelings for sale to wholesalers like Chris, who grow the plants on for distribution to the retail trade.

Chris escorted us the following day to Rippon Lea Gardens in Melbourne. Not far from the imposing and highly-ornamental, Romanesque-style brick home built in the late 1800s is the massive iron structure which houses the fernery. Recently restored, the arc-shaped structure is covered with timber slats and resembles an enormous aircraft hanger. The spacious grounds of the English-country-like estate feature large spreading, staghorn-bedecked trees and

ornamental shrubs, lakes, and vistas.

NELSON

After ten days in Australia, we flew from Melbourne to Christchurch, New Zealand, where we used the brief time between planes for a quickie tour by car of the city, and then reboarded our plane for the early evening flight to Nelson. We were met at the hotel by members of the Nelson Fern Society who warmly greeted us and who were delighted to see Barbara after almost 17 years. We spent one very active day in Nelson with members of the Society walking the Pukatea Trail in the Hira Forest in the gorse-covered hills above Nelson, and in visiting the homes and ferneries of some of the members.

In all, we saw a rich sampling of the ferns Nelson and New Zealand have to offer. *Asplenium oblongifolium* (formerly *A. lucidum*) is a large attractive New Zealand native with broad erect or arching pinnate fronds with shiny deep green lanceolate pinnae. In contrast, *A. flaccidum* is a delicate, lacy-looking and quite variable fern with long narrow bipinnate fronds. These hang gracefully from the trees along with the coarser-looking "Kangaroo Fern" (*Microsorium diversifolium*) and other epiphytes such as *Blechnum filiforme*. The latter fern is a climbing fern with many faces. When young, the plant is small and has roundish, sharply toothed pinnae. As it climbs and matures, the pinnae become long and narrow.

Of course, we saw a good deal of

Cyathea dealbata, the Silver Tree Fern (or Ponga) and emblem of New Zealand, that day and throughout the rest of our trip. The species is easily identified by the silvery-white undersurface of the fronds. Another distinctive native tree fern is the striking *Cyathea medullaris*, the Black Tree Fern (or Mamaku). You can't miss the jet-black tree trunk, ebony, fist-sized fiddleheads, and magnificent crown of spreading fronds. Other finds that day included the filmy fern, *Hymenophyllum demissum*, *Botrychium australe*, the Parsley Fern (yes, it does look like a small sprig of parsley!), and *Leptopteris hymenophylloides* (or as one of our hosts said, "I'm an awful lady"). The other notable is *Leptopteris superba*, the Prince of Wales Feather Fern. This New Zealand native is found in deep rainforests where it can develop a crown of over six feet in diameter. The plant forms a rosette of "feathery" lance-shaped, shimmering-green fronds which makes the fern a very sought-after and prized addition to the ferneries we visited.

That evening we walked from our hotel to a nearby hall to attend the Society's October meeting. After a brief introduction from each of us, Barbara spoke to the group, and one of its members gave an excellent slide presentation. As the meeting wound down, the tea kettle was set to boil, orders were taken for tea or coffee, and the "hospitality" crew laid out a royal "supper" of finger sandwiches, fruit breads, cookies and cakes, and miniature versions of the famous New Zealand dessert, the "Pavlova". This is a meringue and custard delight, topped with fruit and whipped cream. Yum!

NEW PLYMOUTH

We were met in New Plymouth on North Island by Ailsa McCrone and Iolanthe Small who are both associated with Pukekura and Brooklands Park. This is a 100-acre, 125 year old botanic garden in the heart of New Plymouth which was our first stop of the day. At Pukekura, our visit included a walk in the dense native bushland surrounding the open park areas and opportunities to absorb the dramatic vistas all around us. These included giant Kauris, tree-fern covered hillsides, and masses of rhododendrons and azaleas in every conceivable color.

The gem of Pukekura, however, is the imaginative Fernery and Display House. Here, four rooms connected by a series of tunnels contain sharply-contrasting, truly dazzling collections of orchids, cinerarias, begonias, fuchsias, and foliage plants displayed amongst a unique selection of New Zealand and exotic ferns. A pot of *Davallia Tasmanii* caught Barbara's and my attention, for we had both put this on our "wish list" of ferns to acquire during our trip. *D.*

Tasmanii is a small, robust-looking plant with thick, darkish brown rhizomes and short broadly-triangular, 3-pinnate fronds. This species occurs only on the Three Kings Islands northwest of the North Cape of New Zealand.

Tupare, our next stop, is a nine-acre jewel created in 1932 on the edge of the Waiwhakaito River from a hilly wilderness of gorse, blackberry, and bracken. Today this English-style landscape garden assaults the senses with color and texture as exotic as the heady fragrance of gardenia. Native

plants and trees are effectively combined with ornamental maples, crabapples, dogwood, rhododendrons, azaleas, and other flowering favorites in a tender spring palette of burgundy, rose, pink, pale salmon, white, and soft, shimmering greens. Unique features such as stone walls; pergolas; ornate, painted iron benches; terraced pools; and long winding walkways impart a richness to the careful, sensitive plantings and give Tupare a unique feeling all its own. In contrast, Puiketi Rhododendron Trust is a wide-open, "rough-cut", 900-acre garden punctuated by tall tree ferns and blazing, almost gaudy rhododendrons in every size and color.

The last stop of the day was to a private garden which artistically combines flowering trees, shrubs, and plants. A series of paths moved us into and through "flowering rooms" which immersed us in the rich colors, shapes, and fragrances of this well-planned and harmonious garden.

ROTORUA/AUCKLAND

Over the next two rainy days we made our way by mini-bus north towards Auckland, our final stop before heading home. We had ample opportunity to see New Zealand's mountainous countryside dotted with sheep and to appreciate the rugged beauty of North Island. We also made a few stops to scramble into the wet "bush" after ferns. As we neared Rotorua, we visited Waimangu Volcanic Rift Valley, whose craters were formed by the violent eruption of Mr. Tarawera in 1886. As we descended the walking track leading to the boiling hot springs, we were surrounded by billowing clouds of steam, imposing cathedral-like rock formations, and a plant world shaped by its adaptation to the excessive heat, acidic soil, and toxic minerals found in geothermal areas. In Rotorua, we also saw evidence of thermal activity in the area at Whakarewarewa Thermal Reserve as part of our tour of the nearby Maori Arts and Crafts Institute.



Angiopteris evecta

In Auckland, we were hosted by Noel Crump, a fern nurseryman, who took us for a tour of the ferns at Auckland University led by John Braggins, a botanist there. Later we met Mrs. Muriel Fisher for a walk through the lovely "Fern Glen" created by her late husband Bill. The Glen is a dense pocket of hilly rainforest cut with steep tracks. Before lunching at Noel's, we then met Graeme Platt at his native tree nursery. For the last twenty years, Graeme has staunchly advocated the use of native trees for timber — such as the dense, mastlike Kauri — instead of the alien pines which are destroying other native plants as well as the natural New Zealand landscape. Graeme is finally seeing his efforts rewarded and is now working with the Forestry Institute to develop Kauri forests. After lunch, Noel, Graeme, and John took us to the Cascade/Kauri Scenic Reserves in the Waitakere Ranges outside of Auckland for a last native bush walk through memory-making scenic panoramas of tree-fern dotted mountainsides.

We returned home with goodie-bags filled with spores galore and such ferns as *Asplenium flaccidum*, *Blechnum colensoi*, *Davallia Tasmanii*, *Microsorium diversifolia*, *M. scandens*, and *Pyrrosia serpens* and warm memories of the wonderful people we met and the experiences we shared together.

How to Prepare Home & Garden For A Hurricane continued from page 5

link fence. And, last, I put all my potted plants on the ground inside my enclosure (I had no place indoors left to put them and it would have taken too long to move them all).

All our vehicles were parked as far away from any trees as possible. The RV was parked close to the side of our house and sustained only a broken vent cover. I parked my station wagon along the same side of the house into the back yard in front of our boat. (No one in Florida seems to have any room in their garages for cars — too much stuff and no basements!) A neighbor's palm tree broke the luggage rack and the downed powerlines slapped at the windshield until it broke, but it was still drivable afterwards.

All this preparation is very time consuming and tiring. I usually make myself a check list so I don't forget anything. Andrew started to come in around 1 AM, August 24. I remember completing my check list at 11 PM, August 23. The kids, my Mom and I took her dog for one last walk before we holed up inside. The cliché "The calm before the storm" is certainly true: It was a beautiful night, not a breath of wind, not a dog barking, cricket chirping, or bird calling. It was a totally calm and completely silent evening. Very eerie when you realize what was to come.

As I'm writing this (it's April 1st) we've just gotten back into our house after having the floors done in tile. The painting is about half done. I've had my enclosure up for about a month and am now in the process of reinstating the watering system and lattice. I still have all the repotting of my ferns ahead. The pool should be done in one more day and I finally got the final inspection done on my roof. And if my contractor would ever show up on a regular basis I could get my kitchen done. So what's left is: to buy new furniture, carpeting, have new insulation blown into the attic, replace the security system, paint the outside of the house, unload the storage container that still sits like an ugly duck in my front yard, and get some new shutters to cover all the french doors. We're hoping to be finished by June, in time for next hurricane season.

And, as bad as all this must sound, I'd still rather deal with a hurricane than an earthquake any day.

President's Message continued from page 1

germinating box); and an enlightening talk on botanical Latin as applied to ferns. Plan to join us at 10:00 at the Species Foundation - I hope to see you there!

Spring. I for one am very glad that it has come. I promised myself I would not weary you all with an essay on the beauties of the fern garden right now - suffice it to say that this is a great time of year to be a fern grower. Immerse yourself in the ferns you have during these fleeting spring days. Pull the weeds, delight in the new croziers, spread a little compost. Get involved with your ferns, enjoy them. And remember the Hardy Fern Foundation - we're doing all we can to help further that enjoyment.

FROM THE EDITOR! - Lets take a look!

SUE OLSEN

We are pleased to announce that Joan Gottlieb will chair the Fern Directory Project. Several responses have made their way to my desk, but we'd like the directory to be as comprehensive as possible so please send information on your garden and ferny attractions of your area to Joan at: 2310 Marbury Rd., Pittsburgh, PA 15221

Margaret Amberson of Shrewsbury, MA writes that her plant of *Athyrium pycnocarpon*, unlike the Salt Lake City specimen described by James Horrocks, does indeed have branching rhizomes. "I have had the plant for about 15 years. During that time I have several times divided off a piece to give to others, and it is now growing in all directions through the stones that surround it."

I have recently received an announcement from Intercept Ltd. Their book *Fern Horticulture: Past Present and Future Perspectives* is available for 42.50 Pounds Sterling. The centenary symposium presented by the British Pteridological Society is the best symposium I have ever attended anywhere (and I've been to some outstanding ones). This informative work includes all of the presentations and is available from them at P.O. Box 716, Andover, Hants, SP10 IYG, England.

We have accepted an invitation to participate in the Berkshire Botanical Garden's Plant Society Fair on Saturday, August 7, 1993. This fair's purpose is to "promote the awareness and benefits of our many national and regional plant societies," and coincides with the first day of their annual Summer Festival and 24th Annual Flower Show. The Hardy Fern Foundation will pay the exhibitor's fee, however, we need volunteers from the area to staff the booth. You will receive free admission to the Botanical Garden events. Please help us with your volunteer hours and confirm your commitment by writing to our corresponding secretary, Suzanne Hattery at 25519 140th Lane SW, Vashon Island, WA 98070

Watch Your Newsletter for Upcoming Articles On:

Growing Ferns in Southwest Mississippi

(Practical advice and philosophical musings)

Touring Batholomew's Cobble and the Norcross Wildlife Sanctuary

Building a Cobble

Profile of *Polystichum Deltodon*

Your contributions are most welcome! Please send them to Sue Olsen, 2003 128th Ave. S.E., Bellevue, WA 98005

Member Evaluations

June is evaluation month for the Hardy Fern Foundation. At our satellite gardens, at the primary garden in Federal Way, Washington, and in members gardens all over the country ferns are evaluated. Information received is invaluable to us in determining hardiness and garden worthiness.

We had a good response from members last year, and we would encourage all members to participate this year. Simply stroll through your garden, looking critically at your ferns. Note the variety, and using a simple scale of 1 to 5 (with "1" indicating a very poor condition and "5" a superior plant), jot down how the ferns are doing right then. Please note any ferns which died at any time during the last year, and if you know when (summer, winter) or even why, it would be helpful to know. Any additional comments on site, climatic conditions, etc. would be very welcome.

Please do your evaluation anytime - but sometime - during the month of June. Mail these to the HFF, P O Box 166, Medina, WA 98039-0166. Please mark your envelope "Member Evaluation"

Thank you for your participation - we look forward to hearing from all of you!





Fern Festival 1993

Thursday June 3, 7:30 PM

Lecture
Ferns in the Landscape
 TIM MOREHOUSE
 CENTER FOR URBAN HORTICULTURE

Friday June 4, 10:00 AM - Noon

Garden Tour
Highlands Garden of Betty Miller

Friday, June 4, 1:00 PM -5:00 PM
 &
Saturday June 5, 10:00 AM - 2:00 PM

Plant Sale
 CENTER FOR URBAN HORTICULTURE
 350L NE 41ST ST. SEATTLE

Come and join us for a special weekend of fern activities:

Tim Morehouse brings his sense of humor and expertise with ferns and related flora to our podium. He is "quote" a part-time instructor at the University of Cincinnati and a full-time freelance writer. His book Basic Projects and Plantings for the Garden by Stackpole Books will debut this spring (and may be available at the Festival.) Evening tickets which also allow plant sale purchases are \$7.00 for non-members; \$5.00 members and students with ID.

Friday's garden tour features one of the most outstanding plant collections in the nation. The Miller garden has evolved with love and knowledge over many years and is of particular interest to the specialist who will find the unusual and well tended treasure. Admission is by reservation only and limited to fifty on a first come basis. Reservations should be mailed to Suzanne Hattery, 25519 140th Lane SW, Vashon Island, WA 98070. Please enclose \$10.00 per person and a SASE for your confirmation.

The plant sale will continue the twenty year old tradition of offering proven garden native and exotic staples that entice the beginner as well as the experienced; the unusual imports, plus exciting "new to us" introductions. Experts will be on hand to answer questions and offer guidance See you there.

Book Review

British Ferns and their Varieties by Charles T. Druery, pp. 410, 40 colour plates, 319 black and white line drawings in the text (including some photographs), 98 black and white nature prints, published in 1910 (but not dated on the title page) by George Routledge.

Charles Thomas Druery was born in 1843 and began cultivating ferns during the late 1870s. From then until his death in 1917 he became one of the leading authorities on variation among the native British Ferns (the other was Dr. F. W. Stansfield). He was a prolific writer on ferns and the British Pteridological Society has eight folio volumes, each over 2 inches thick, crammed with press cuttings of all his published articles on ferns in the newspapers and journals of the time, dating from 1882 to 1917 - a veritable mine of information! Additionally he published this book in 1910, as well as two others in earlier years, *Choice British Ferns* in 1888 and *The Book of British Ferns* in 1903. He also inaugurated the Society's *British Fern Gazette* in 1909, and in its earlier years his vast contribution of papers practically carried the journal up to the time of his death. This man's contribution to fern variety knowledge was phenomenal! We cannot thank him enough.

In style *British Ferns and their Varieties* is not unlike *Our Native Ferns* by E. J. Lowe (1876). Species are listed and varieties given alphabetically. Most species are illustrated in colour, as are some cultivars, with many more cultivars illustrated in black and white. There are, however, three big improvements in Druery's book:

- 1) The exclusion of most second rate cultivars - so common in Lowe's work.
- 2) The inclusion of 98 nature prints selected from the *Jones Nature Prints*, a series of 323 published by Colonel Arthur Mobray Jones from 1876 to 1880.
- 3) The benefits of over a quarter of a century's extra accumulated knowledge among fern growers.

Even today this book still gives the most comprehensive account of variation in British ferns. Specific names may have changed but there is still a very good chance of any given type of variety being described, and perhaps, even illustrated. The 98 nature prints in the appendix represent something close to the hardcore of the best in variation achieved by the British ferns. The owner of any fern illustrated in this appendix is indeed fortunate. To me they are, as a group, the elite among our British ferns.

From the above it is obvious that I value this book very highly, even today it is probably still the book I use more than any other. It is, however, not perfect. About 20 years ago I was offered by post a copy bound in two volumes, I was fascinated and immediately agreed to buy it. Unfortunately someone beat me to it. That someone turned out to be Henry Schollick, the then President of the *British Pteridological Society*. Henry later sold this book to Jimmy Dyce, currently President Emeritus of the Society, and I was fortunate then to be able to see it. (I have been reliably informed that, in due course but, I hope, not for a long time yet, I am to inherit this book from Jimmy!) It was originally owned by Dr. F. W. Stansfield, another former President of our Society, who had it split into two volumes. He interleaved it with blank pages which he used to annotate the book with numerous corrections and comments. Some time ago Jimmy compiled a list of these notes, and more recently, aided by another member of the Society, Nick Schroder, they have been reprinted in a small booklet which will shortly be published by the BPS.

In a book of this quality it seems unjust to pick out any particular feature but, as a devotee of the polypods, I think I might select them. Fourteen are represented among the Nature Prints (of 22 originally published in the *Jones Nature Prints*); of these about 9 are still in cultivation. In total 45 cultivars of polypodium are described in the text. The nature prints have been of the greatest value to me in my efforts to name clones still in cultivation. How much I wish I could find a form which looks like 'Grandiceps Parker' - looking at the depicted frond it is

Book Review continued

extremely difficult to believe the parent species is a polypodium! One criticism of the coverage of the polypods is the lack of information on 'Cambricum Hadwinii'. True there is a photograph of it in his *The Book of British Ferns* (1903) but it is not of the highest quality, unless of course I just don't recognize it because it is not known in cultivation today! I always hope that maybe some of our 'lost' treasures, like 'Hadwinii', might resurface in the Pacific North West as survivors of the Joseph Wiper collection which was transported, along with its owner, to British Columbia early this century.

One other feature of this book worthy of highlighting here is the chapter on fern selection. This illustrates admirably the possible rewards, to the persistent grower, when trying to raise new and better forms. Examples given here cannot be bettered, i.e. the spore progeny of *Polystichum setiferum* 'Plumosum Bevis', and *Athyrium filix-femina* 'Plumosum Axminster'.

Having waxed so enthusiastically about this book it might be of interest to give some guide to its likely asking price on the second hand book market. Here in England now it is a very scarce book and, I think £35 would be a bargain. In the United States, with the current demise of the £ sterling that works out at not much more than \$50 - even more of a bargain.

Martin Rickard (aided and abetted by Jimmy Dyce)
- Editor, *Pteridologist* (a British Pteridological Society publication)

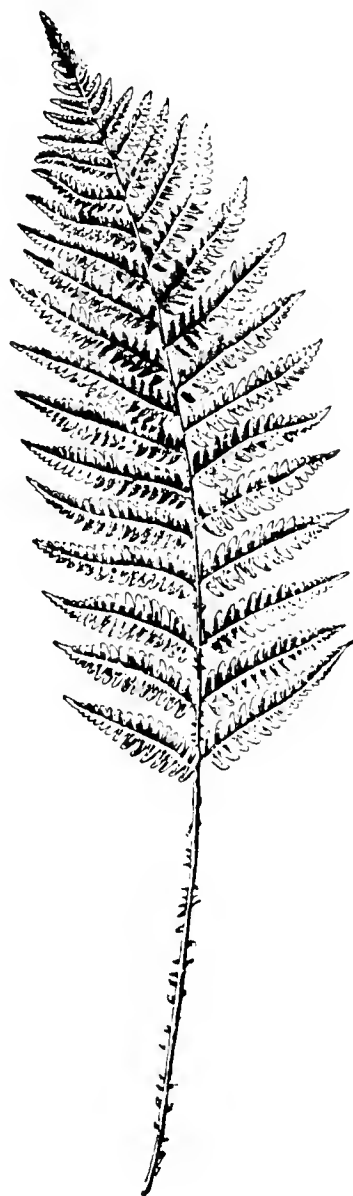


Guy Huntley and Steve Hootman inspect damage in the Lower Study Garden at the Rhododendron Species Foundation following the January Inauguration Day wind storm.

Dryopteris Goldiana

JAMES R. HORROCKS
SALT LAKE CITY, UTAH

Dri op' ter is Gold i ana



The name *Dryopteris* (Greek) means "Oak fern" or more properly "Wood fern". The species epithet "Goldiana" honors John Goldie who discovered this fern at Montreal, Canada, hence the colloquial name "Goldie's Fern". It is also called Giant Wood Fern or more properly, "Goldie's Giant Wood Fern" and is certainly by any standard the most massive native *Dryopteris* in all of North America. This magnificent species ranges from the eastern provinces of Canada to the southern uplands of

Virginia, North Carolina and Tennessee. It is entirely missing from Western North America. It is by no means a common fern and is often absent from many areas. Herbert Durand reported unexpectedly finding his first colony in a swamp, three hundred feet from his home, after hunting for it for three seasons all over southern New York and northern New Jersey. It is found in deep but open woods in moist, humus-rich, usually circumneutral soil, often frequenting stream banks and talus slopes. It is not likely to be confused with any other wood fern due to its great size. A related species, *D. celsa*, the Log Fern, may be mistaken for *D. Goldiana* by the novice, but placed side by side, Goldie's Giant Wood Fern is easily identified and certainly lives up to its name.

Description: The rhizome is short, stout, semi-erect to ascending, but creeping a little below the surface. The crowns of next year's growth form in late summer to early fall, and are copiously covered in white and golden-brown elongated scales. The croziers are the most shaggily clad of any North American fern. Each fiddlehead can be up to an inch and a half in diameter. The stipe is as much as one third the length of the blade, very thick and straw colored, and with light tan scales, each with a darker center. The rachis is green with fewer scales. The blade is broadly ovate and the entire frond can be from two to four feet long, and even five or six feet in particularly favorable localities. The frond width can be as much as fourteen inches or so. This species is bipinnate, or very nearly so, the individual pinnae being seven to

eight inches long and as much as an inch and three quarters wide in some specimens. This is certainly a fern of noticeable proportions. The sori are near the midveins and very neatly spaced. The indusia are kidney-shaped and translucent. This fern is diploid and often hybridizes with other species with rather interesting results.

Culture: Goldie's Giant Wood Fern is very cold-hardy. It is an extremely desirable fern in any woodland garden. It may even grow larger under cultivation than in the wild. The soil should be loose and rich in leaf-mold. It is at its best in a cool shady situation and should be protected from hot weather. The soil should always be kept damp and never allowed to dry out. It grows well in companionship with the Glade Fern, *Athyrium pycnocarpon* since both have the same likes and dislikes. It is sure to attract attention in any garden, as its stately fronds command notice. The one adjective that describes it best is "Magnificent"!

References:

The Fern Guide, Edgar T. Wherry, 1961, Doubleday, New York

Field Book of Common Ferns, Herbert Durand, 1949, G. P. Putnam's Sons, New York

Ferns to Know and Grow, F. Gordon Foster, 1971, Hawthorn Books, Inc. New York

Ferns, Roger Grounds, 1974, Pelham Books LTD, London

Thanks

The Hardy Fern Foundation sincerely thanks the following members who have kindly given above and beyond the basic membership categories:

Contributing and supporting:

Mrs. Hugh Baird
Birmingham Fern Society
Elizabeth Boyd
Mrs. Phil Duryee
James Horne
Mrs. Charles Hyde
Charles Lamade
Marshall Majors
Mrs. Pendleton Miller
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Aubrey Zaffula

Special thanks also go to many people for their gifts of plants, but especially to Guy Huntley and Jim Nash for their extensive offerings to benefit our collections.

The Hardy Fern Foundation would also particularly like to recognize and thank Sylvia Duryee and

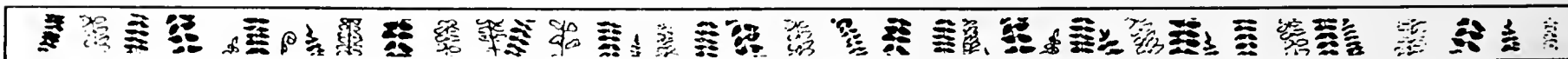
Jocelyn Horder for purchasing an outstanding selection of rare fern books as a nucleus for a library, and Don Armstrong for very generously contributing his personal library of venerable fern works to us.

Membership Reminder

Hardy Fern Foundation memberships begin July 1 and end June 30 of each year. Your renewal date is now listed on your address label.



L to R Otis Hyde, Suzanne Hattery with daughter Linnea, Barbara Carman, Tom Gillies, Harry Olsen at the HFF booth at the Northwest Flower and Garden Show.



CALENDAR

June 3 - 5th FERN FESTIVAL

See complete coverage Page 11

Hardy Fern Foundation Open House and Classes at the Rhododendron Species Foundation:

Join us on Sunday, June 6, 10:00 - 11:00 AM

Propagation of Ferns

Sylvia Duryee

Learn when to collect spore and what materials are necessary for successful propagation. Each participant will be provided with containers and planting materials which may be taken home.

Introduction to Botanical Latin, 11:00 - 12:00 Noon

Steve Hootman

Many people are intimidated by Latin. This class will help you become more familiar with plant names, their meanings and pronunciations. Basic botanical and horticultural nomenclature and taxonomy will be covered, with special emphasis on ferns.

Bring your lunch and join us for a garden tour following the classes.

Fern Show and Sale

Fairchild Tropical Gardens

June 13, 1993, 9:30 - 4:30

Fairchild Tropical Gardens, Miami, Florida

San Diego Fern Society Fern Show and Sale

Fern Show Aug. 21 Noon - 5:00; Aug. 22 10:00 - 5:00

Plant Sale Both Days 10:00 - 5:00

Casa del Prado, Balboa Park, San Diego

Hardy Fern Foundation

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